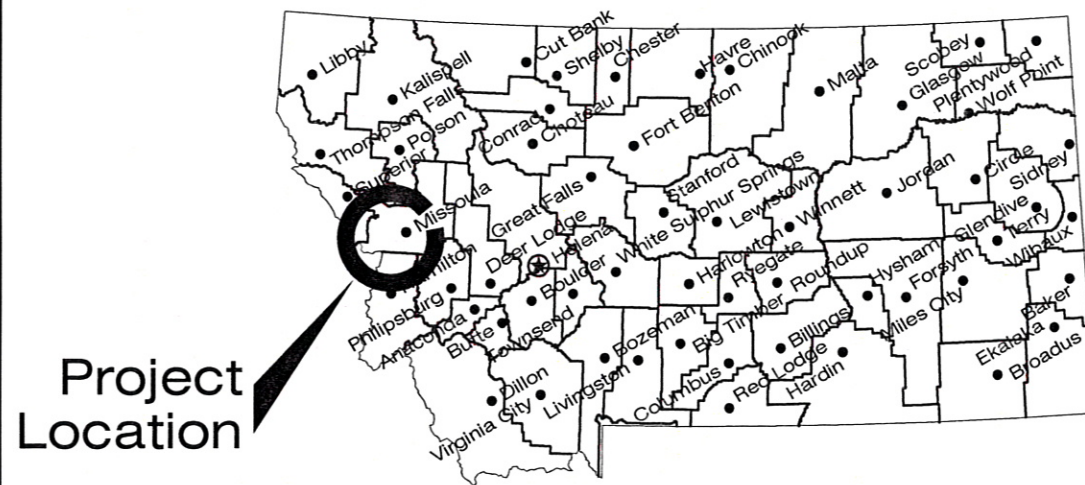


MONTANA FISH, WILDLIFE & PARKS

SITE IMPROVEMENTS AT THE KELLY ISLAND FISHING ACCESS SITE

MISSOULA, MONTANA

FWP PROJECT #7133707

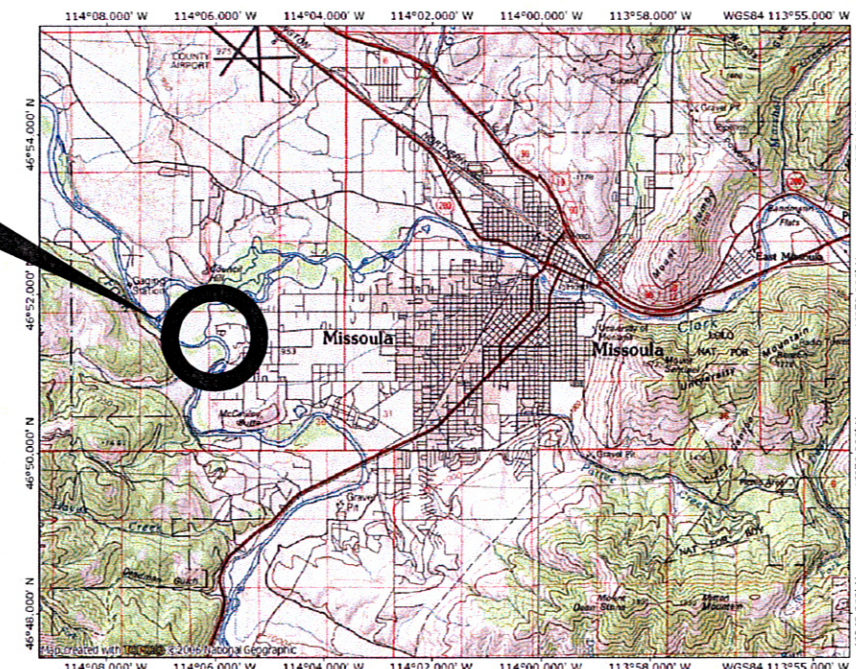


Project
Location

Location Map

No Scale

Project
Location



Vicinity Map

No Scale

MONTANA FISH, WILDLIFE AND PARKS DESIGN AND CONSTRUCTION

MAILING ADDRESS:
PO BOX 200701
HELENA, MT 59620-0701
TEL 406.841.4000
FAX 406.841.4004
fwp.mt.gov/Doing Business/Design&Construction

PHYSICAL ADDRESS:
1522 9th AVENUE
HELENA, MT 59601

TERRITORIAL LANDWORKS, INC.

MAILING ADDRESS:
PO BOX 3851
MISSOULA, MT 59801
TEL 406.721.0142
FAX 406.721.5224
www.territoriallandworks.com

PHYSICAL ADDRESS:
1817 SOUTH AVE. WEST
SUITE A
MISSOULA, MT 59801

DRAWING INDEX

- | | |
|----------------------------------|-------------------------------------|
| 1 OF 6 COVER SHEET | D1 OF D7 BOAT RAMP PLAN & PROFILE |
| 2 OF 6 LEGEND AND QUANTITY TABLE | D2 OF D7 CAST-IN-PLACE RAMP DETAILS |
| 3 OF 6 NOTES | D3 OF D7 CABLE MAT RAMP DETAILS |
| 4 OF 6 DEMOLITION PLAN | D4 OF D7 DETAILS |
| 5 OF 6 SITE PLAN | D5 OF D7 DETAILS |
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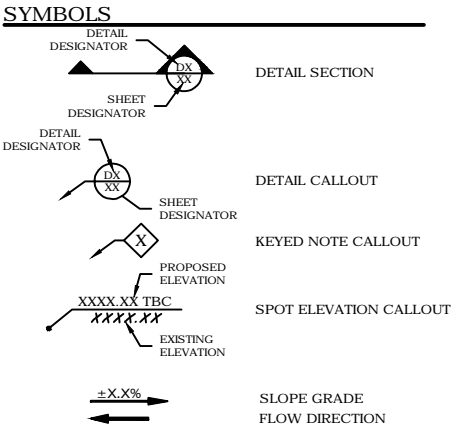
**Montana Fish,
Wildlife & Parks**

Cover Sheet
Kelly Island FAS (near Missoula, MT)



SHEET: 1 of 6

LEGEND	
EXISTING	PROPOSED
(E) PROPERTY BOUNDARY	(P) LOT LINE
(E) FENCE LINE	(P) EASEMENT
(E) MAJOR CONTOUR	(P) WATER LINE
(E) MINOR CONTOUR	(P) WATER SERVICE
(E) ASPHALT	(P) SEWER LINE
(E) GRAVEL	(P) ROAD CENTERLINE
(E) CONCRETE	(P) FENCE LINE
(E) SIGN	(P) DITCH
(E) DECIDUOUS TREE	(P) SWALE
(E) CONIFEROUS TREE	(P) MAJOR CONTOUR
	(P) MINOR CONTOUR
	(P) ASPHALT
	(P) CONCRETE
	(P) CULVERT
	(P) SIGN



ABBREVIATIONS			
CBU	CLUSTER BOX UNIT	PT	POINT OF TANGENT
CMP	CORRUGATED METAL PIPE	PVI	POINT OF VERTICAL INTERSECTION
ELEV	ELEVATION	R	RADIUS
(E)	EXISTING	ROW	RIGHT OF WAY
EX	EXISTING	SIM	SIMILIAR
FG	FINISHED GRADE	STA	STATION
FL	FLOWLINE	STD	CITY OF MISSOULA STANDARD DRAWING
HP	HIGH POINT	SW	SIDEWALK
INV	INVERT	TBC	TOP BACK OF CURB
LF	LINEAR FOOT	TOA	TOP OF ASPHALT
MAX	MAXIMUM	TOC	TOP OF CONCRETE
MIN	MINIMUM	TYP.	TYPICAL
MPOC	MID POINT OF CURVE		
NWE	NORTHWESTERN ENERGY		
(P)	PROPOSED		
PC	POINT OF CURVATURE		
PRC	POINT OF REVERSE CURVATURE		

NOTE: NOT ALL FEATURES SHOWN IN LEGEND WILL BE PRESENT ON PLANS

Quantity Table			
Item	Description	Estimated Qty	U/M
1	Mobilization/Demobilization	1	LPSM
2	Erosion and Sediment Control	1	LPSM
3	Floating Turbidity Curtain	100	LF
4	Boat Ramp Removal and Disposal	1	LPSM
5	Clearing and Grubbing (assume 6" depth)	3000	SY
6	Excavation above Subgrade	553	CY
7	Embankment in Place	667	CY
8	Revegetation	1220	SY
9	3/4" Minus Crushed Base Course, 8" Depth	3701.0	SY
10	2" Thickness PG 58-28 Asphalt Concrete Pavement (Type B)	3260.0	SY
11	Woven Geotextile	3701.0	SY
12	Concrete Sidewalk	254	SF
13	Cast-In-Place Concrete Boat Ramp	1287	SF
14	Pre-Cast Concrete Cable Mat Boat Ramp	720	SF
15	Boat Ramp Riprap	50	CY
16	Concrete Curb Stops	18	EACH
17	FWP Supplied Sign Panel Installation	7	EACH
18	Bank Stabilization Temporary Irrigation System	1	LS
19	Reset Existing Boulders	18	EACH
20	CMP with FETS	50	LF
21	Bank Stabilization	135	LF
22	Pavement Markings including ADA Painting	1	LPSM
23	Two Rail Fence	130	LF



Montana Fish,
Wildlife & Parks

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Legend and Notes
Kelly Island FAS (near Missoula, MT)

SHEET: 2
of 6

GENERAL CONDITIONS OF CONSTRUCTION:

1.

By proceeding with the Work as shown on these Drawings, the Contractor makes the following representations:

a.

Contractor has examined and carefully studied the Drawings and other related data.

b.

Contractor is familiar with and is satisfied as to all federal, state and local laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

c.

Contractor has visited the site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance or furnishing of the Work.

d.

Contractor acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Drawings with respect to Underground Facilities at or contiguous to the site.

e.

Contractor has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor including applying the specific means, methods, techniques, sequences and procedures of construction, if any, expressly required by the Drawings to be employed by the Contractor, and safety precautions and programs incident thereto.

f.

Contractor is aware of the general nature of work to be performed by Owner and others at the site that relates to the Work.

g.

Contractor has given Engineer written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Drawings and the written resolution thereof by Engineer is acceptable to Contractor.

h.

The Drawings are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

2.

If Contractor believes that any subsurface or physical condition at or contiguous to the Site that

a.

is uncovered or revealed either is of such a nature as to require a change in the Drawings; or

b.

differs materially from that shown or indicated in the Drawings; or

c.

is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided in the drawings;

then Contractor shall promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.
- STANDARD SPECIAL PROVISIONS:
1.

The Contractor shall be responsible for all permits, licenses and fees required for completion of this project unless specifically noted otherwise.

2.

The Contractor shall provide the Owner with a 24 hour phone number of a party responsible and capable of immediate local response to emergency maintenance for the duration of the Work. Contractor shall provide the name of the responsible party and phone number in writing prior to proceeding with the Work.

3.

Unless noted otherwise, the contractor shall be responsible for any necessary traffic control on and off-site including obtaining any applicable permits.

4.

Material stockpiled along the project route shall be done so in a manner that does not affect public safety and is in a neat and orderly fashion.

5.

The Contractor shall be responsible for disposing of all waste and excess materials such as, but not limited to: vegetation, trees, brush, asphalt, concrete, sub-grade soils, etc., offsite in accordance with local, state and federal laws. The Owner reserves the right to request certain waste materials to be stockpiled at a location on-site.

6.

If required by regulation, the Contractor is responsible for preparing and submitting a Notice of Intent and SWPPP. The contractor will be responsible to adhere to the MDEQ or EPA approved Storm Water Pollution Prevention Plan (SWPPP), if applicable to the project. The contractor is responsible for repairing any damage made to BMPs identified in the SWPPP.

7.

The Contractor will be required to make every effort to immediately restore the construction area once the construction task is completed. All seeding AND revegetation shall be completed in accordance with the drawing and specifications. Once restoration is begun, it must be completed without interruption to the extent possible.

8.

After all work on this project is completed and before final acceptance of the project, the entire project shall be neatly finished to the lines, grades, and cross sections shown on the plans and as hereinafter specified.

a.

Drainage facilities, such as inlets, catch basins, storm pipe, culverts, and curb and gutter shall be cleaned of all debris, gravel, silts or other foreign material.

b.

The Contractor shall remove and dispose of all construction stakes.

c.

All areas disturbed by the construction shall be shaped to present a uniform appearance blending into the contour of adjacent properties. All surface replacement and landscaping shall be completed. Except as otherwise permitted, all excess excavated materials shall be disposed of away from the site of the work.

d.

Broken concrete and other debris resulting from pavement or sidewalk removal, excavated rock in excess of the amount permitted, and other waste and debris encountered in excavated work, and other similar waste materials shall be disposed of away from the site.

9.

There will be no separate measurement or payment for cleanup, and all costs for such work shall be included in the Contract Price.

10.

No on-site burning of waste materials will be allowed.

11.

If a street has not been surfaced and cleaned, the Contractor shall be responsible for dust control and maintenance of the street. Also, if detours are made on a gravel road, the Contractor is responsible for dust control and maintenance on the detours. See "Air Quality" below also.

12.

Daily street sweeping shall be completed on both ends of each street during construction. Unpaved detours or any other fugitive dust emission sources from construction and demolition should be watered and/or chemically stabilized so emissions are less than 20% opacity.
- UTILITY NOTES:
1.

The Contractor shall notify appropriate personnel for utility locations and notice of construction commencement at least two business days prior to proceeding with the Work. Before Contractor proceeds with the Work, a common locate service (One Call) is available at 1-800-424-5555. All Underground Facilities may not be located by the One Call service including but not limited to such Underground Facilities as irrigation systems, public and private water and sewer systems, etc.

2.

The information and data shown or indicated in the Drawings with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise noted:

a.

Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or date; and

b.

The cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

i.

Reviewing and checking all such information and data,

ii.

Locating all Underground Facilities shown or indicated in the Drawings,

iii.

Coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

iv.

The safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

c.

At least 2 business days before beginning any excavation, the Contractor shall, according to MCA 69-4-501, notify all owners of underground facilities and coordinate the Work with the owners of such underground facilities. The information shown or indicated in the Drawings with respect to existing underground facilities is based on information and data obtained from the owners of the facilities without field exploration, and as such, Owner and Engineer are not responsible for the accuracy or completeness of such information or data.

3.

The Contractor shall support and protect all exposed utilities in conformance with the utility owner's standards.

4.

All utility services shall be constructed per the International Plumbing Code, Local Jurisdictional policy, and the service provider standards and specifications.

5.

All utility work shall be completed before paving.

SUBMITTALS, QUALITY CONTROL & ASSURANCE, INSPECTIONS, AND TESTING

1.

Contractor shall provide all submittals in the project drawings and specifications prior to procurement or installation of associated materials or products.

2.

Engineer and owner reserve the right to require submittal of materials or product information not specifically called for in the project drawings and specifications.

3.

Contractor is responsible for quality control and quality assurance.

4.

Contractor is responsible for hiring an independent testing agency for all required testing as defined in the contract.

5.

The Contractor will be required to prepare a set of detailed as-built drawings to be presented to the Engineer at the completion of the project. The as-built drawings shall be updated daily and reviewed weekly by the Project Engineer. As-built drawings shall include, but not limited to location/depths of existing utilities encountered during completing the Work and location/depths of installed infrastructure completed as part of the Work. Installed infrastructure includes culverts, ponds, storm drainage systems, catch basins, dry-well sumps, storm manholes, swales, ditches, dry utilities (gas, power, phone, etc.), and road and pedestrian features such as handicap ramps, sidewalks, roads, curb and gutter, etc.

CONSTRUCTION NOTES:

1.

All Work shall be in accordance with the project drawings and specifications, Local Jurisdictional Standards, Special Provisions, and Contract Documents.

2.

For road plan and profile sheets, the stationing and elevations provided are for finished grade at centerline of road, unless noted otherwise.

3.

For proposed pipe installations (culverts, storm drains, irrigation, etc.), the stationing is from centerline of pipe and elevations are from invert of pipe, unless noted otherwise.

4.

Elevations shown on the Drawings are to finished surface grade unless otherwise indicated.

5.

All material furnished on or for this project shall meet the minimum requirements of the approving agencies or as set forth herein, whichever is more restrictive.

CONSTRUCTION STAKING:

1.

Contractor to provide all construction staking in accordance with the contract. Cost of staking is incidental to overall contract cost.

2.

Contact Mike Day, P.E. at 721-0142 for digital plans.

GRADING NOTES:

1.

Square cut all asphalt.

2.

Contractor shall protect all adjacent improvements (buildings, roadways, fences, ditches, parking lots, utilities, sidewalks, curbs, gutter, park recreation improvements, trees, etc.) from damage and erosion. All disturbed areas shall be restored to their original condition.

3.

Compact subgrade and gravel cushion to 95% proctor density or per geotechnical engineering report, whichever provides a greater level of compaction.

UTILITY NOTE:

UNDERGROUND UTILITIES ARE SHOWN HEREON AT LOCATIONS MARKED ON THE GROUND BY THE RESPECTIVE UTILITY COMPANIES. THIS FIRM HEREBY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY AND/OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. EXCAVATION OF SAID UNDERGROUND UTILITIES MAY INDICATE ACTUAL LOCATIONS THAT DIFFER FROM THE LOCATIONS SHOWN HEREON.

BOUNDARY AND TOPO DISCLAIMER
LOCATION OF PROPERTY LINES AND EASEMENTS SHOWN HEREON ARE FOR MAPPING PURPOSES ONLY AND ARE APPROXIMATE IN NATURE. THE SURVEY DATA WAS PROVIDED BY ELI & ASSOCIATES SURVEYING AND NOT CONFIRMED BY TERRITORIAL LANDWORKS THEREFORE, TERRITORIAL LANDWORKS DOES NOT TAKE RESPONSIBILITY FOR THIS SURVEY, AND THIS MAP IN NO WAY REPRESENTS A LEGAL BOUNDARY SURVEY.

BASIS OF BEARING
GEODETIC NORTH PER
GPS OBSERVATION

VERTICAL DATUM
NAVD88

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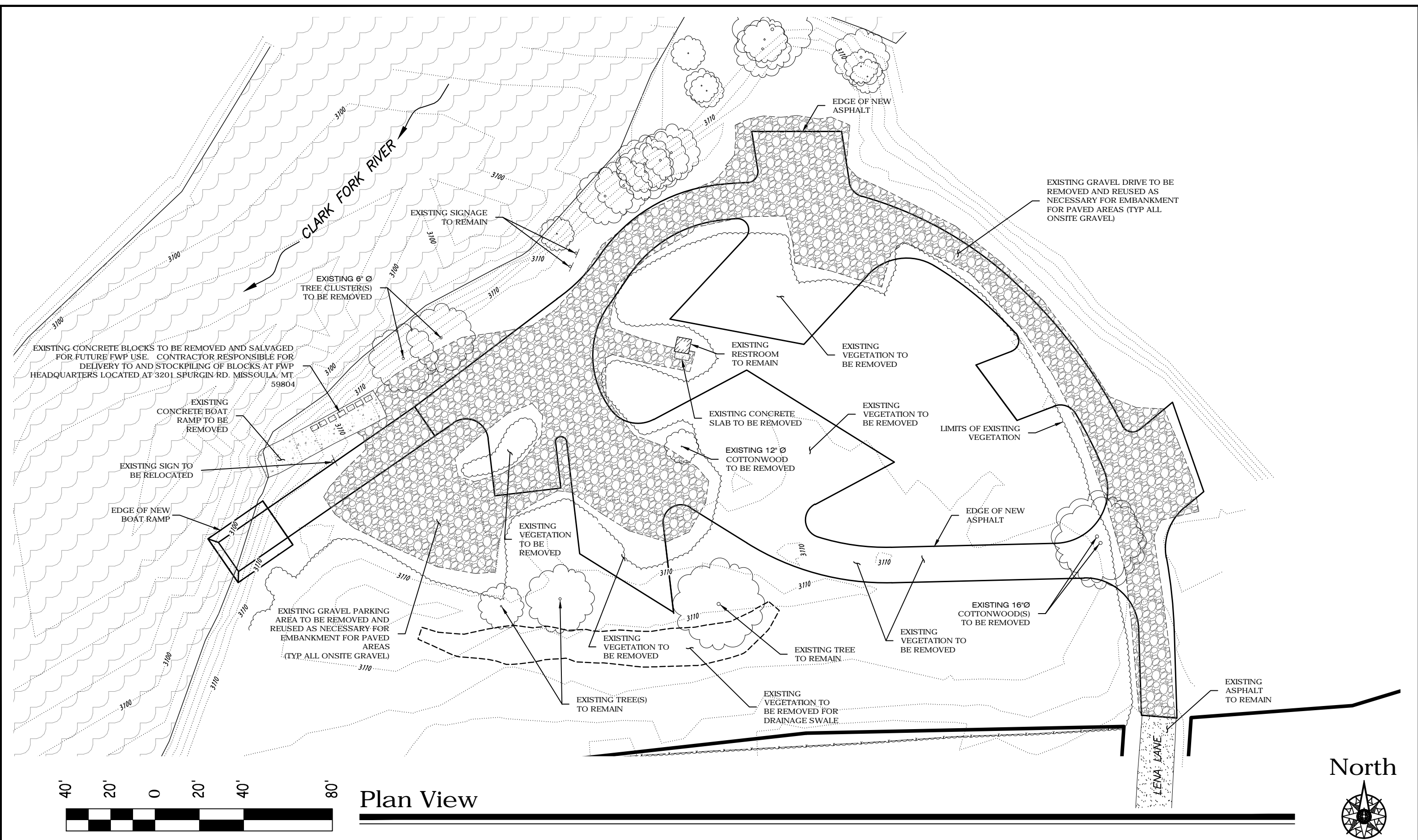
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Montana Fish,
Wildlife & Parks

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Legend and Notes
Kelly Island FAS (near Missoula, MT)

SHEET:
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Plan View



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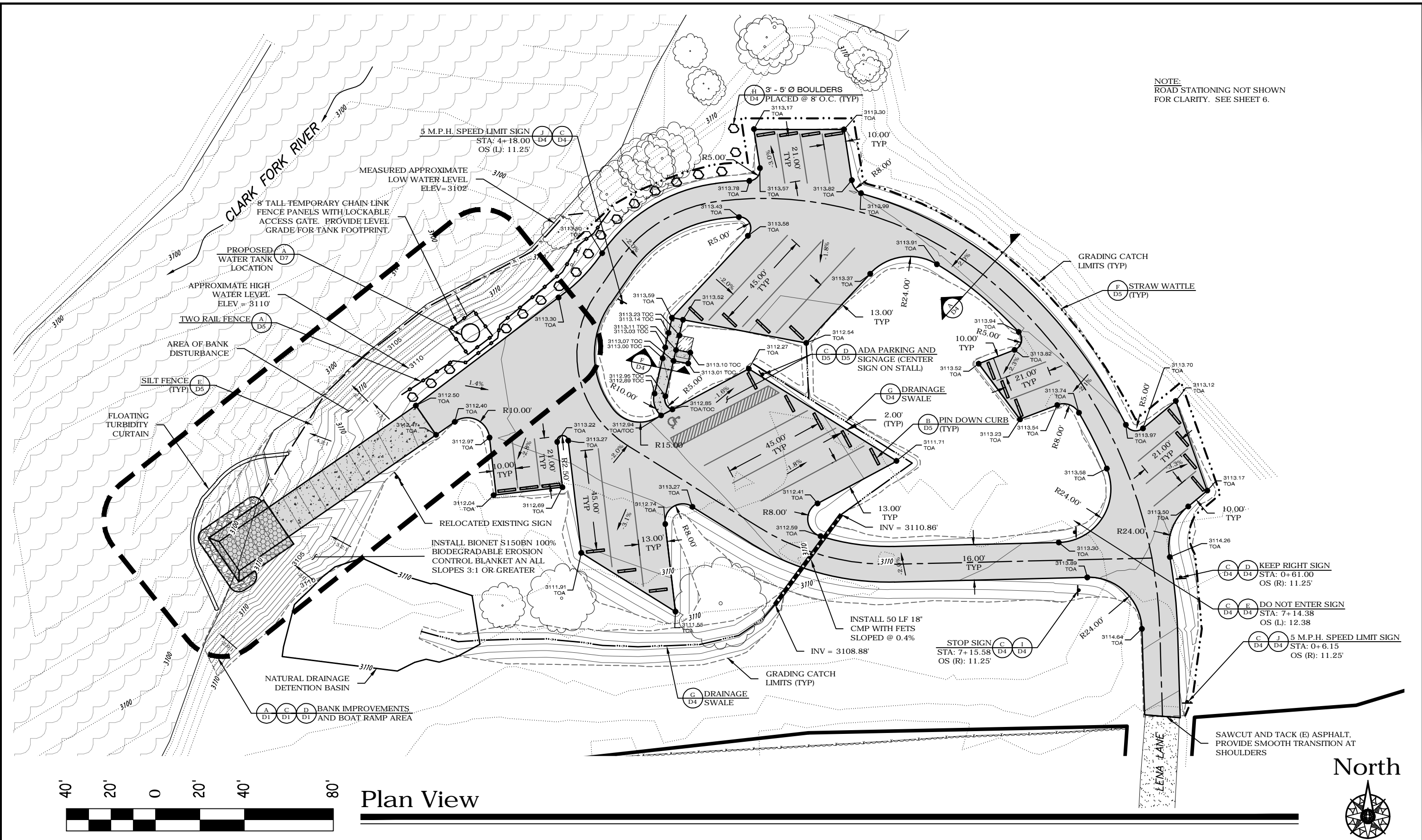
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Demolition Plan

Kelly Island FAS (near Missoula, MT)



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4
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6



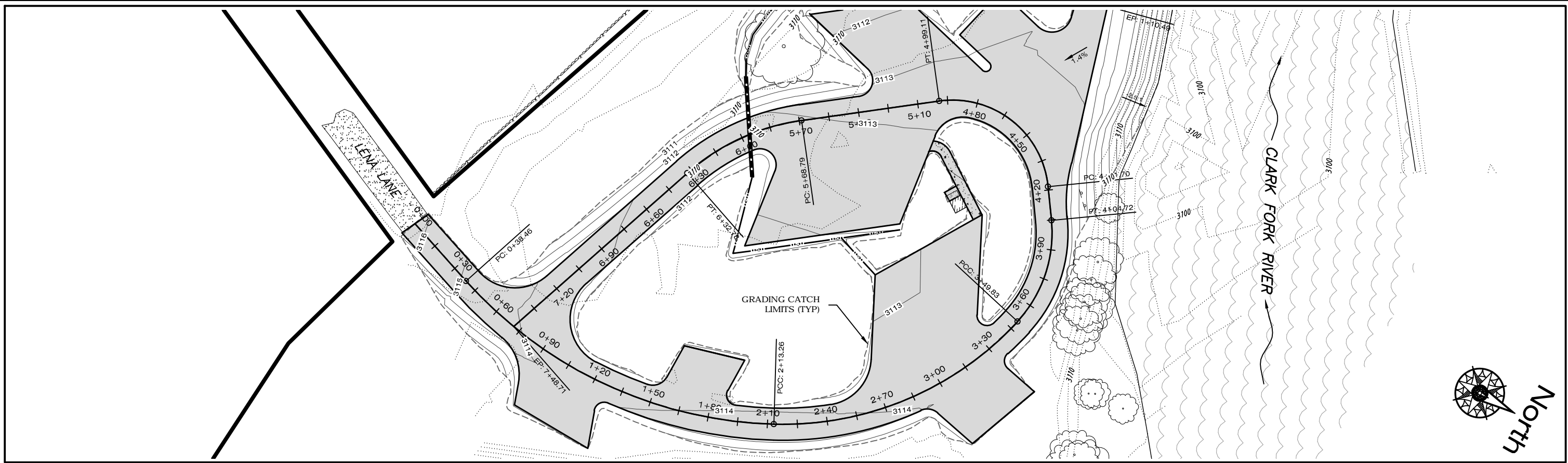
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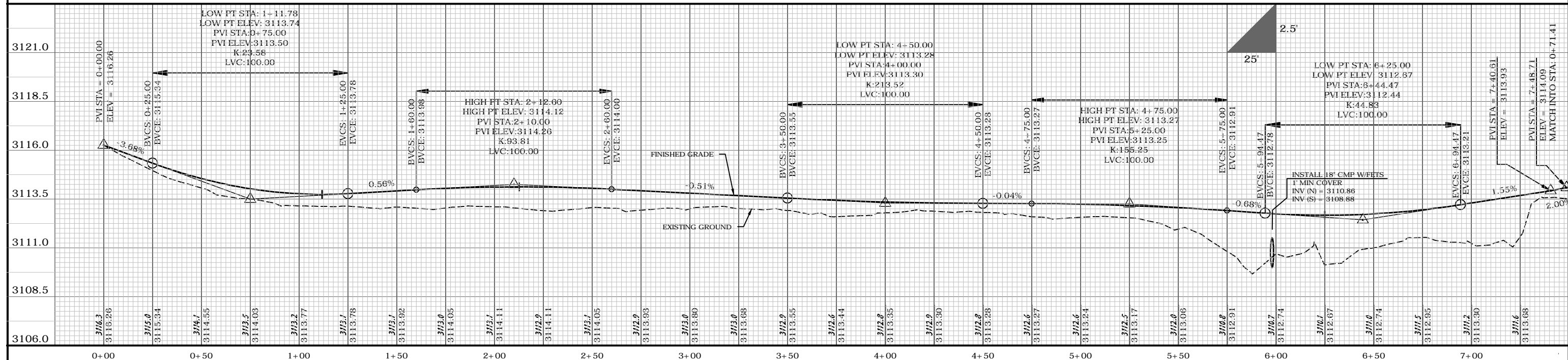
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Site Plan
Kelly Island FAS (near Missoula, MT)



Plan View



Profile View

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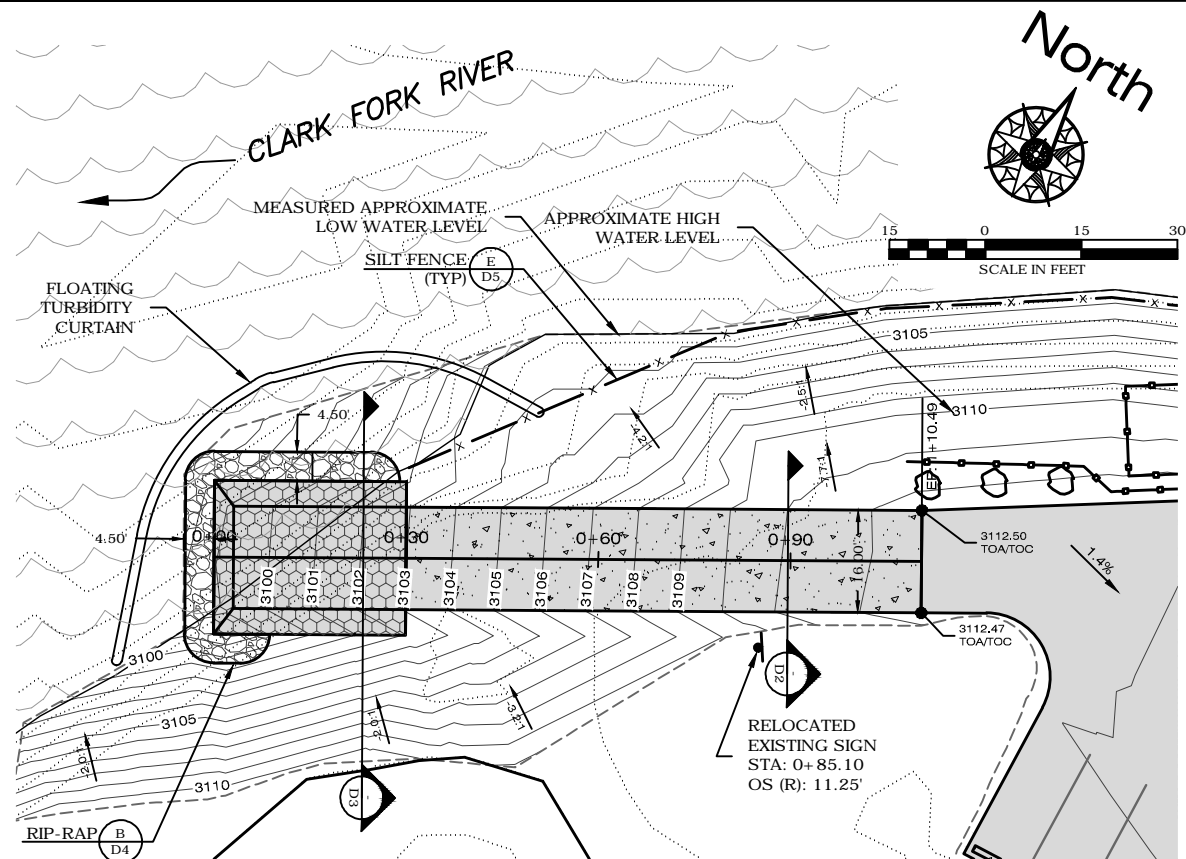


**Montana Fish,
Wildlife & Parks**

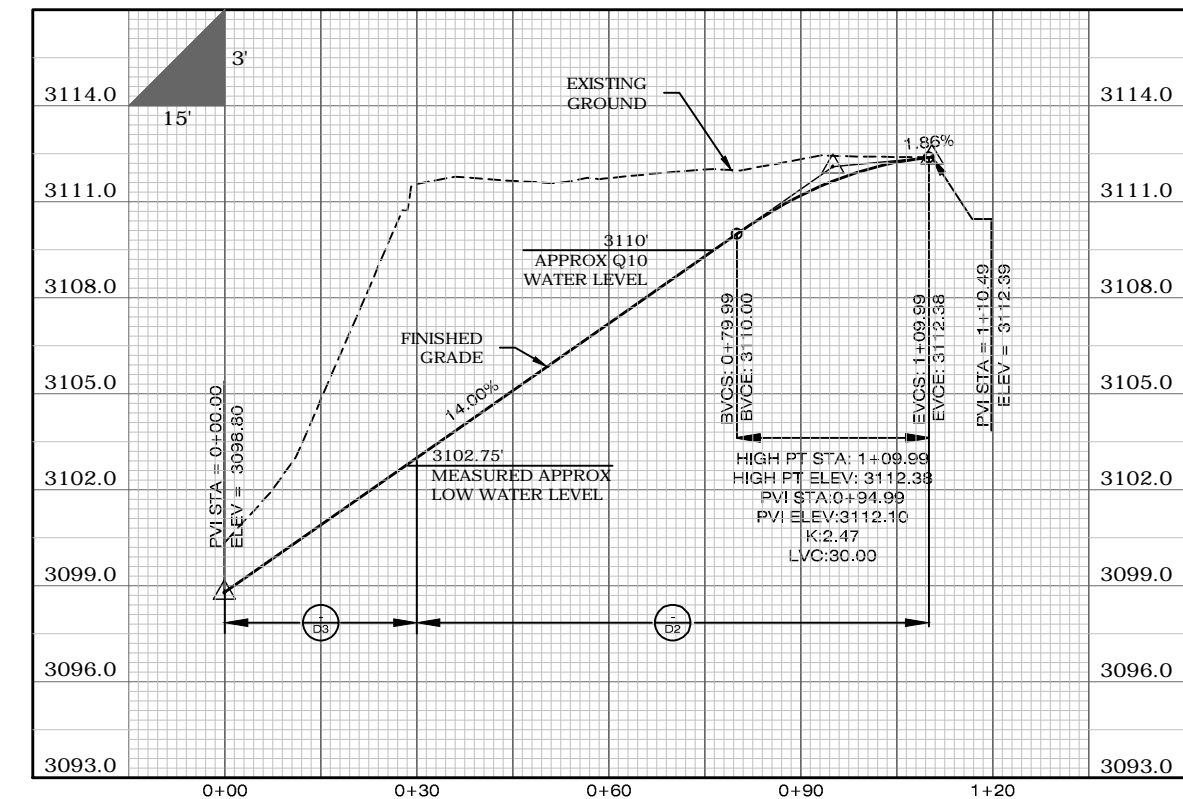
Plan and Profile Sheet
 Kelly Island FAS (near Missoula, MT)



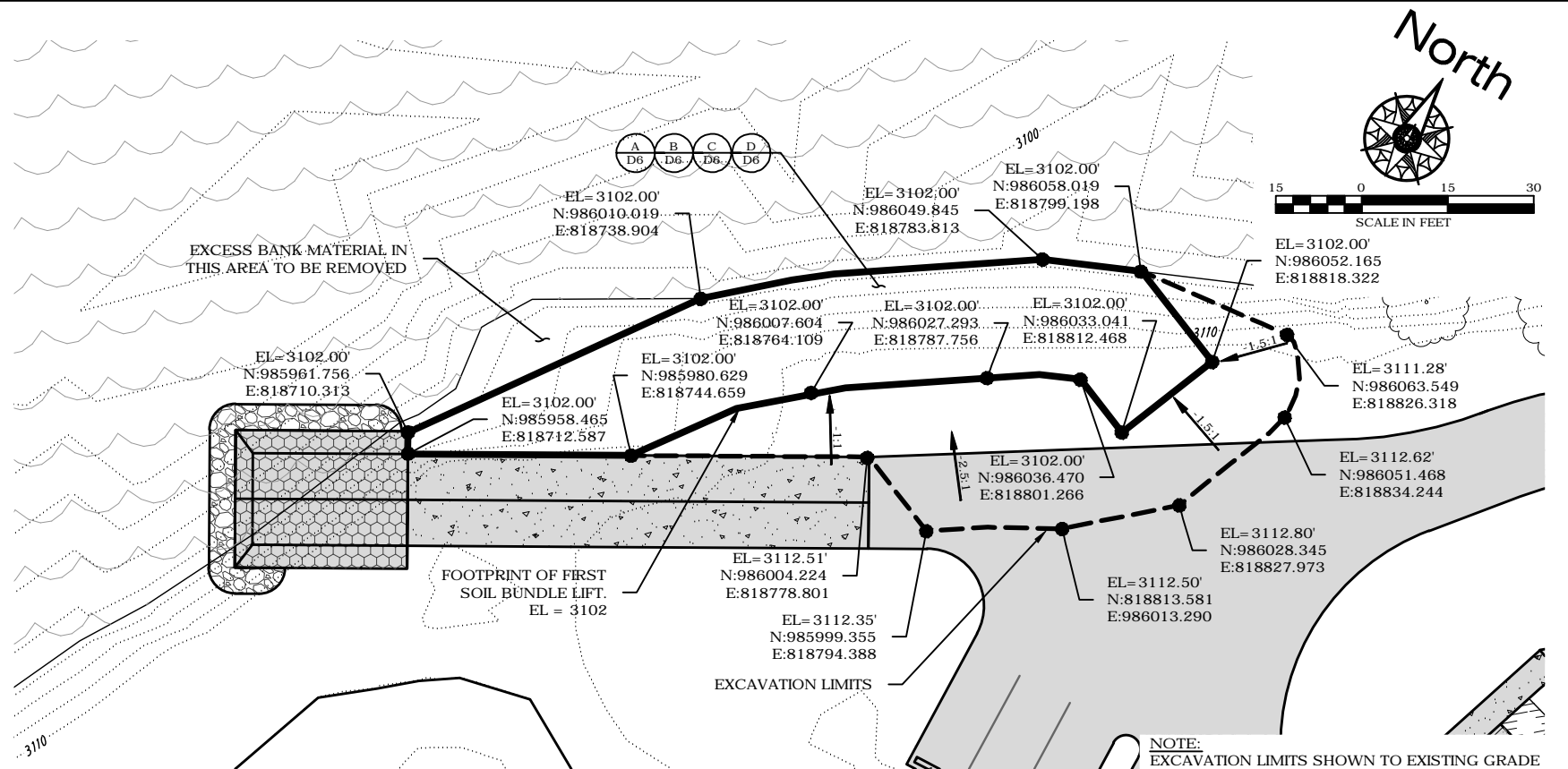
SHEET:
 6 of 6



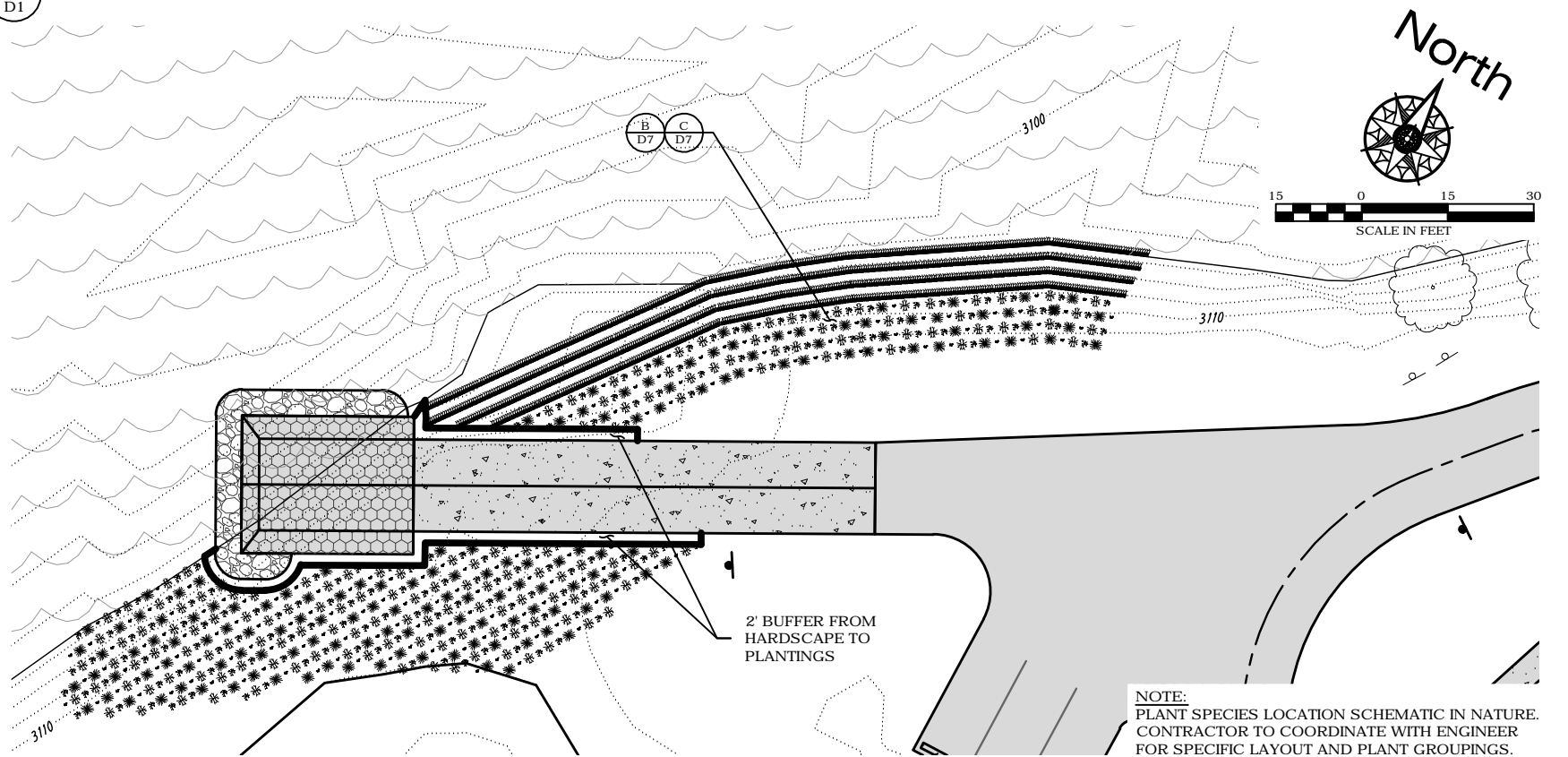
A BOAT RAMP PLAN
D1



B BOAT RAMP PROFILE
D1



C BANK STABILIZATION PLAN
D1



D BOAT RAMP AND STABILIZED BANK REVEGETATION PLAN
D1

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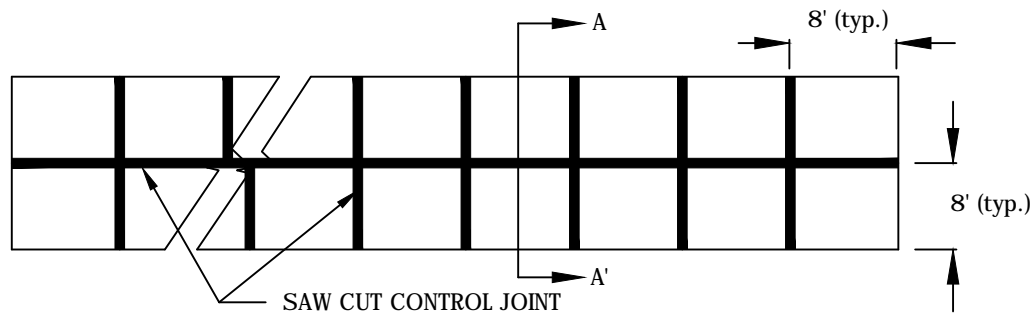
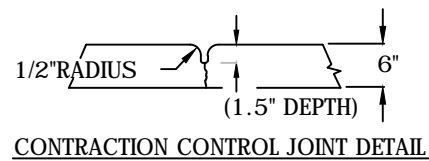


Montana Fish,
Wildlife & Parks

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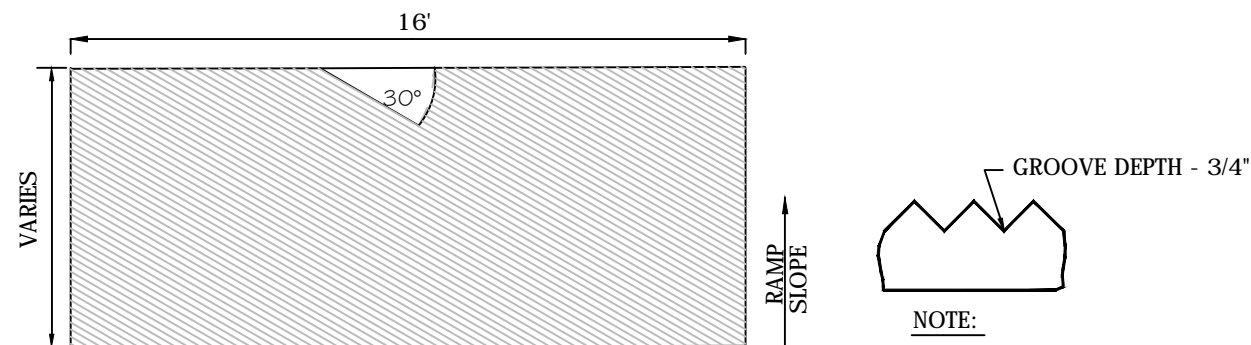
Boat Ramp Plan and Profile Sheet
Kelly Island FAS (near Missoula, MT)

SHEET: D1
of D7

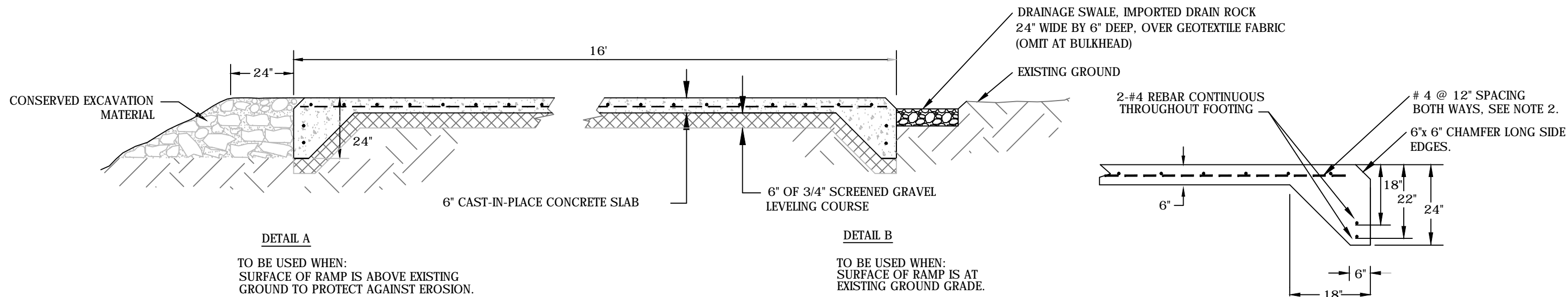


- NOTE:**
1. CONCRETE FOR NEW RAMP IS A 3/4" MINUS; 6-1/2 BAG MIX WITH A MIN 28 DAY STRENGTH OF 4000 PSI, REINFORCED WITH # 4 BARS @ 12" SPACING BOTH DIRECTIONS.
 2. SCREED AND BULL FLOAT CONCRETE, FOLLOWED BY GROOVING THE SURFACE.
 3. SAW CUT CONTRACTION JOINTS AFTER RAMP IS GROOVED.

SLAB CONTROL JOINT DETAIL
PLAN VIEW



- NOTE:**
1. MFW&P WILL PROVIDE GROOVING TOOL



CAST-IN-PLACE CONCRETE
SECTION A-A'

- NOTES.**
1. CONTINUE THICKENED EDGE FOOTING AROUND ENTIRE PERIMETER OF CAST-IN-PLACE CONCRETE.
 2. EXTEND AND EXPOXY #4 BARS MIN 20" (12" O.C.) IN EXISTING CONCRETE CONNECTIONS. PROVIDE EXPANSION JOINT MATERIAL ALONG COLD JOINT CONNECTIONS.
 3. NO CHAMFER ALONG SIDEWALK/BULKHEAD/EXISTING CONCRETE CONNECTIONS.
 4. PROVIDE 2 1/2" CLEAR COVER FOR ALL REBAR REINFORCEMENT.

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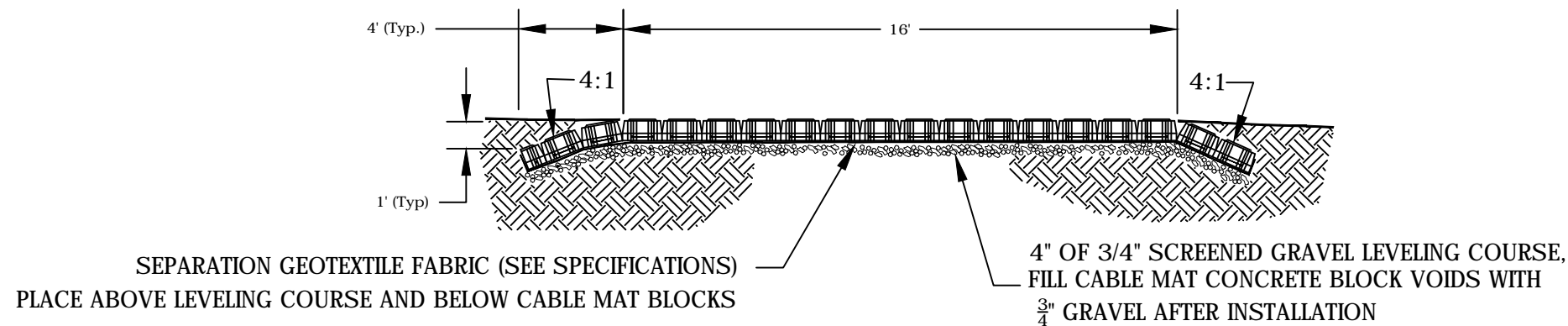
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Montana Fish & Wildlife
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Cast - In - Place Ramp Details
Kelly Island FAS (near Missoula, MT)

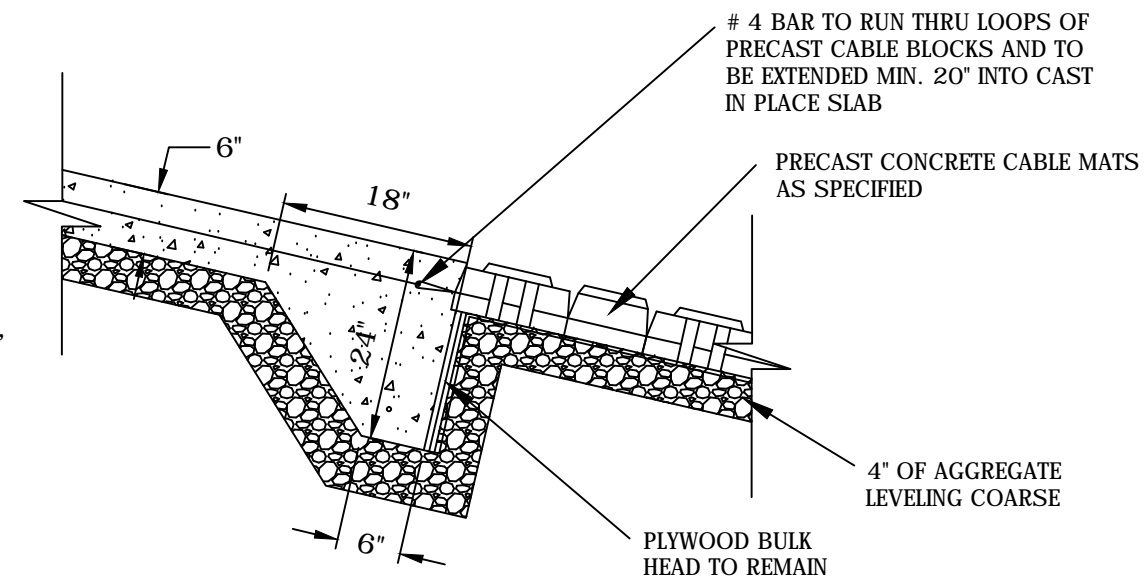
SHEET: D2
of
D7



CABLE MAT RAMP DETAIL

SECTION VIEW

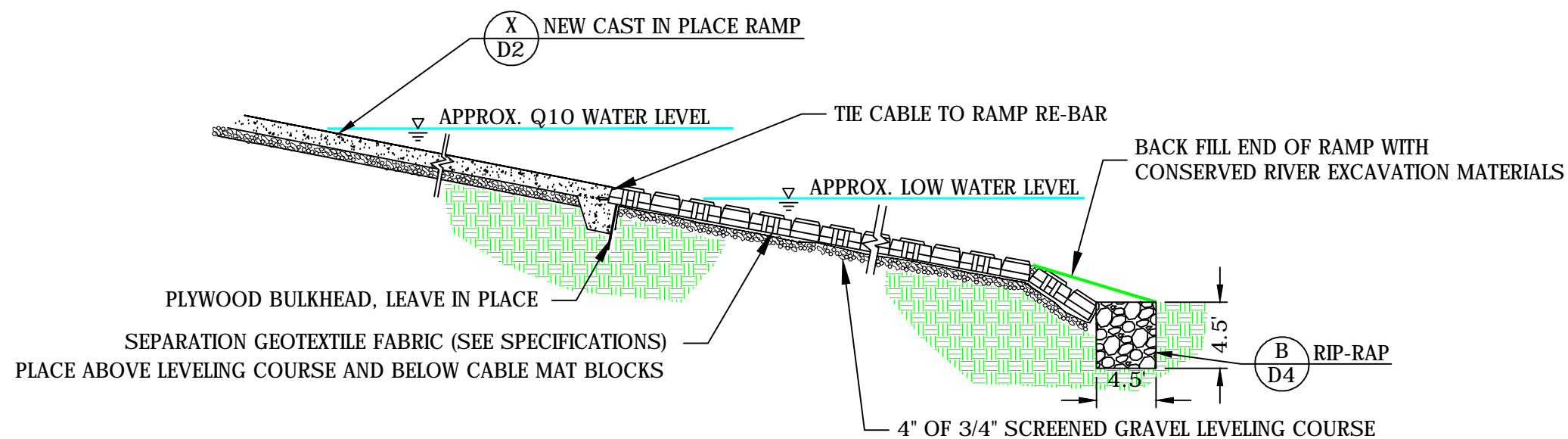
(Not to Scale)



CABLE CONNECTION DETAIL

ELEVATION VIEW

(Not to Scale)



CABLE MAT RAMP DETAIL

ELEVATION VIEW

(Not to Scale)

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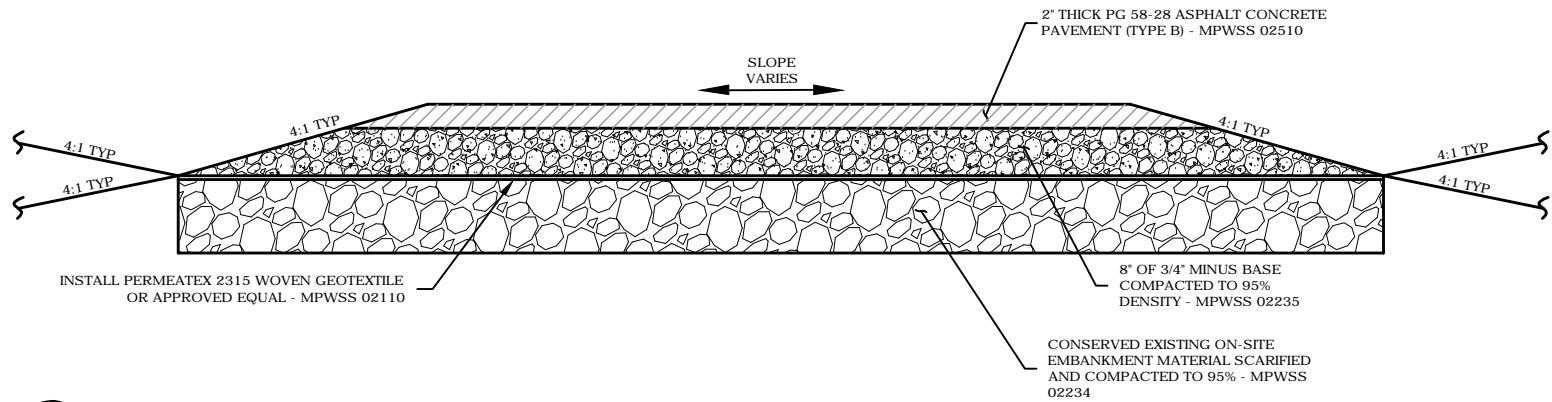
Montana Fish & Wildlife

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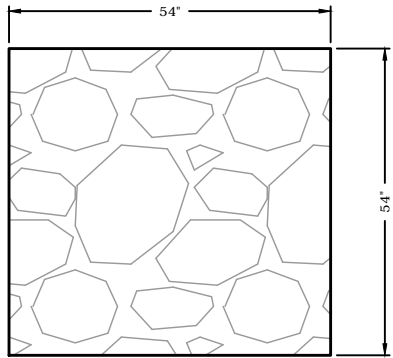
Cable Mat Ramp Details
Kelly Island FAS (near Missoula, MT)

SHEET: D3
of
D7

NOTE:
PLACE 2" THICK CONSERVED
TOPSOIL UP TO ALL ASPHALT EDGES

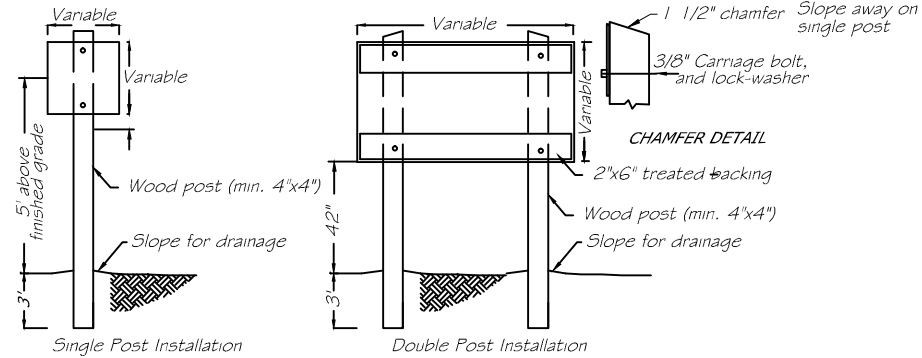


A
D4 ASPHALT CROSS SECTION



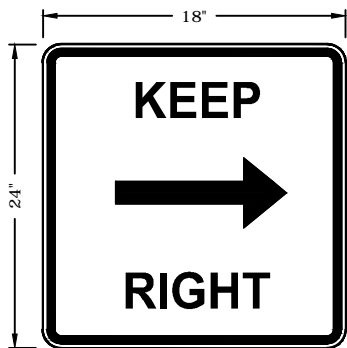
NOTE:
CLASS 6 RIP-RAP D50-36"
GRADATION TABLE SHOWN IN SECTION
02240 OF THE SPECIFICATIONS.

B
D4 RIP-RAP DETAIL



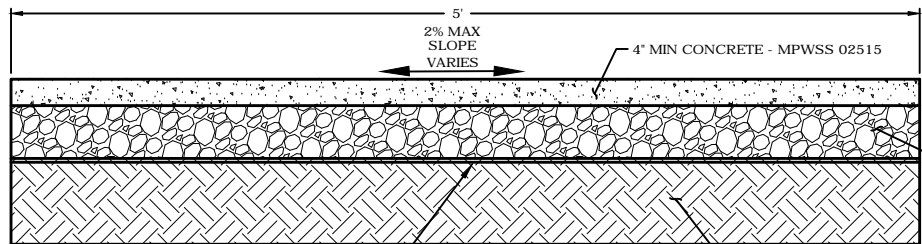
SIGN POST MOUNTING DETAIL
(Not to Scale)

NOTES:
1. Use pressure treated timbers for all sign posts. Need break-away holes (or device) for larger posts.
2. Coat all posts with preservative for all drilled holes and cut surfaces.
3. Use cadmium plated or galvanized steel for all bolts, nuts & washers.
4. Place bolts to not interfere with sign lettering. Paint bolt heads to match sign.
5. Center single post panels to post, overhang panels 3 inch beyond posts for double post installations. Extend all posts 3 inch above sign panels.
6. See break-away detail for posts larger than 4 inches in diameter.



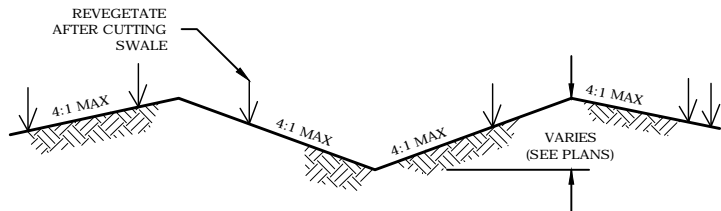
MUTCD: R4-7A
TEXT - BLACK
BACKGROUND - WHITE
BORDER - BLACK

D
D4 KEEP RIGHT SIGN



F
D4 CONCRETE SIDEWALK CROSS SECTION

C
D4 SIGN POST MOUNTING DETAIL

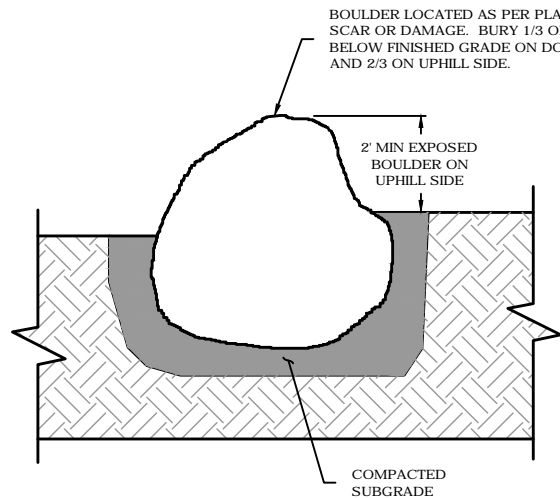


G
D4 DRAINAGE SWALE DETAIL



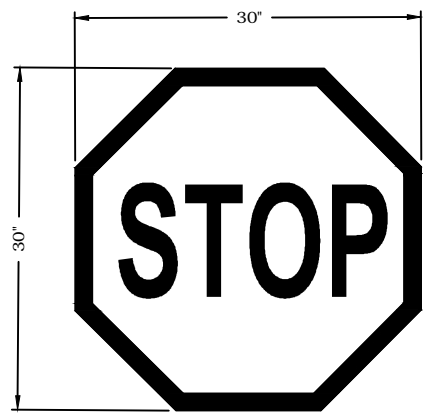
MUTCD: R5-1
TEXT - RED
BACKGROUND - WHITE
BORDER - BLACK

E
D4 DO NOT ENTER SIGN



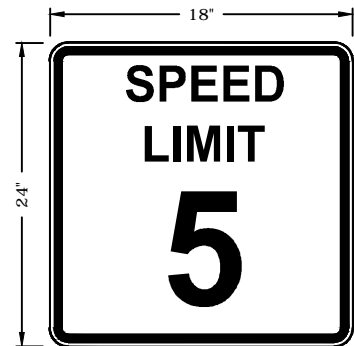
NOTES:
1. BOULDERS TO BE GRANITE/ QUARTZITE, 3'-5' IN DIAMETER AND ROUNDED ON TOP.
2. BOULDERS TO BE PLACED IN 8' ON CENTER SPACING AS SHOWN ON PLANS.
3. BOULDERS TO BE APPROVED BY MONTANA FISH, WILDLIFE, AND PARKS BEFORE DELIVERY TO PROJECT SITE.

H
D4 BOULDER



MUTCD - R1-1
TEXT - WHITE
BACKGROUND - RED
BORDER - WHITE

I
D4 STOP SIGN



MUTCD: R2-1
TEXT - BLACK
BACKGROUND - WHITE
BORDER - BLACK

J
D4 5 M.P.H. SPEED LIMIT SIGN

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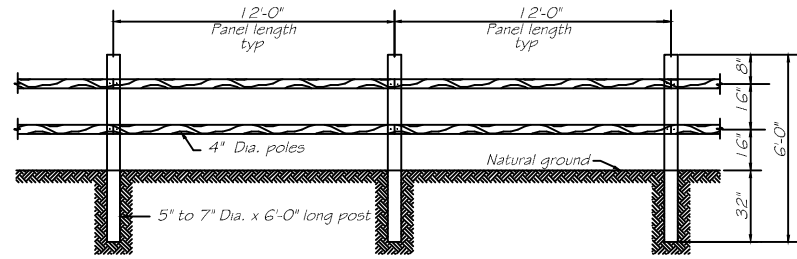
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DETAILS
Kelly Island FAS (near Missoula, MT)

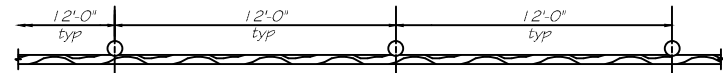
SHEET: D4
of D7

RAIL FENCE DETAIL

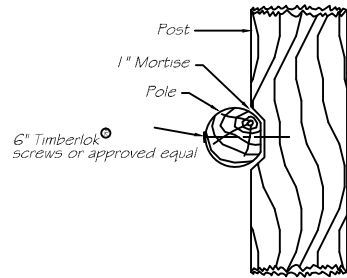
(Not to Scale)



ELEVATION



PLAN

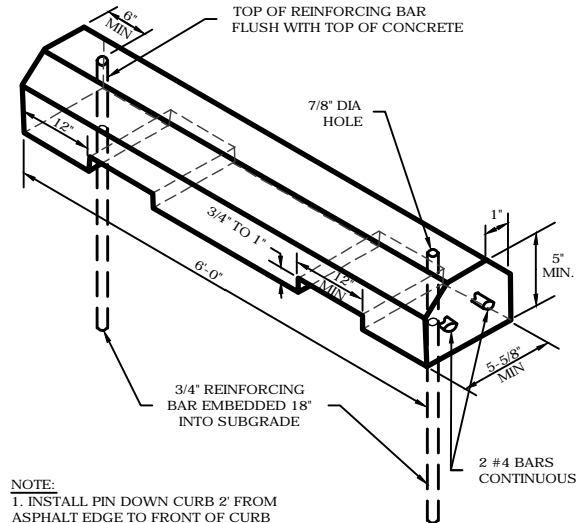


POST AND POLE CONNECTION

(Not to Scale)

NOTES:

1. Bevel pole @ post to achieve 3" thickness.
2. Post and poles to be fully treated, see Section 02820.



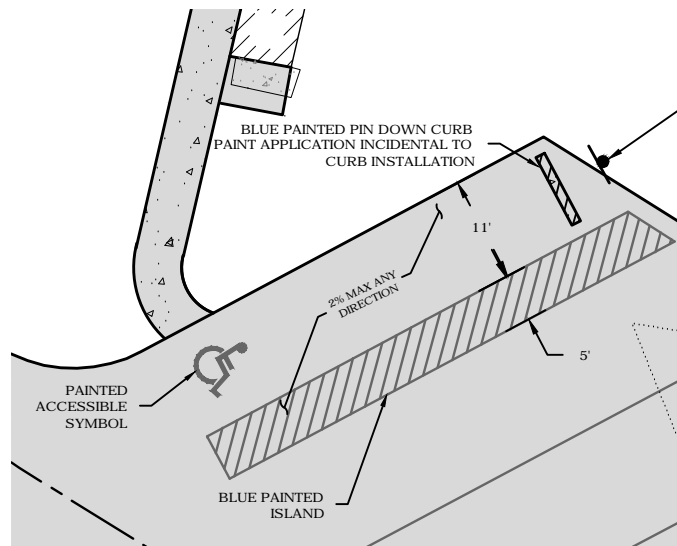
NOTE:
1. INSTALL PIN DOWN CURB 2' FROM ASPHALT EDGE TO FRONT OF CURB

B
D5 PIN DOWN CURB

NOT TO SCALE

A
D5 TWO RAIL FENCE

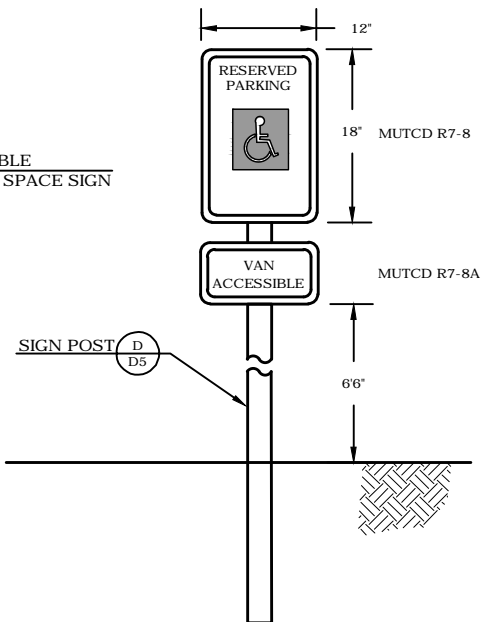
NOT TO SCALE



C
D5 ACCESSIBLE PARKING STALL

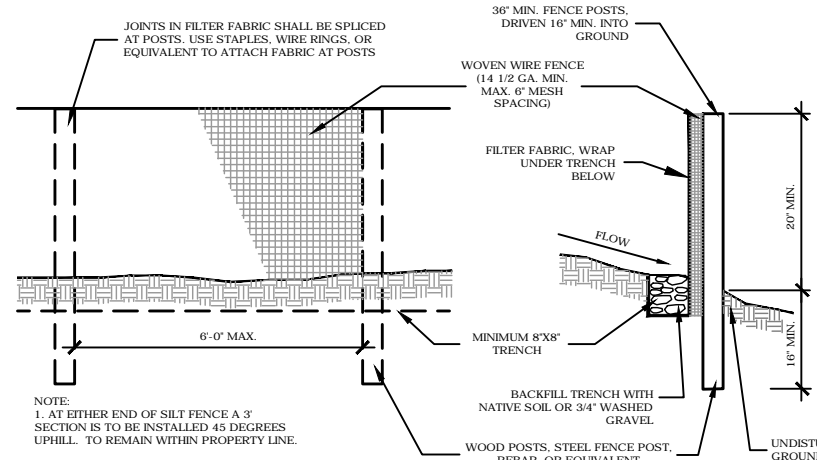
NOT TO SCALE

D
D5 ACCESSIBLE PARKING SPACE SIGN



D
D5 ACCESSIBLE PARKING SPACE SIGN

NOT TO SCALE



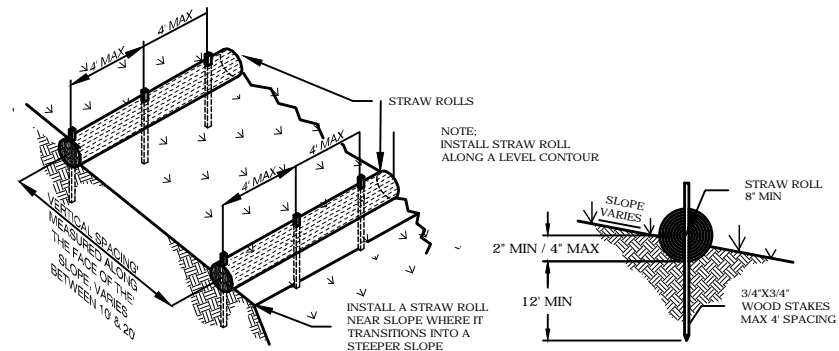
NOTE:
1. AT EITHER END OF SILT FENCE A 3' SECTION IS TO BE INSTALLED 45 DEGREES UPHILL TO REMAIN WITHIN PROPERTY LINE.

- NOTE:
1. FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOURS WHENEVER POSSIBLE.
 2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDDLE SECTION.
 4. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AT TOP AND MIDDLE SECTION.
 5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.
 6. CONTRACTOR TO REMOVE AND DISPOSE OF SILT FENCE ONCE BANK STABILIZATION CONSTRUCTION HAS BEEN COMPLETED.

POSTS: STEEL, EITHER 'T' OR 'U' TYPE OR 2" HARDWOOD.
FENCE: WOVEN WIRE, 14 GAGE, 6" MAX. MESH OPENING.
FILTER CLOTH: FILTER X, MIRAFI 100X, STABIUNKA T140N OR APPROVED EQUAL.

E
D5 SILT FENCE

NOT TO SCALE



NOTE:
INSTALL STRAW ROLL ALONG A LEVEL CONTOUR

INSTALL A STRAW ROLL NEAR SLOPE WHERE IT TRANSITIONS INTO A STEEPER SLOPE

F
D5 STRAW WATTLE DETAIL

NOT TO SCALE

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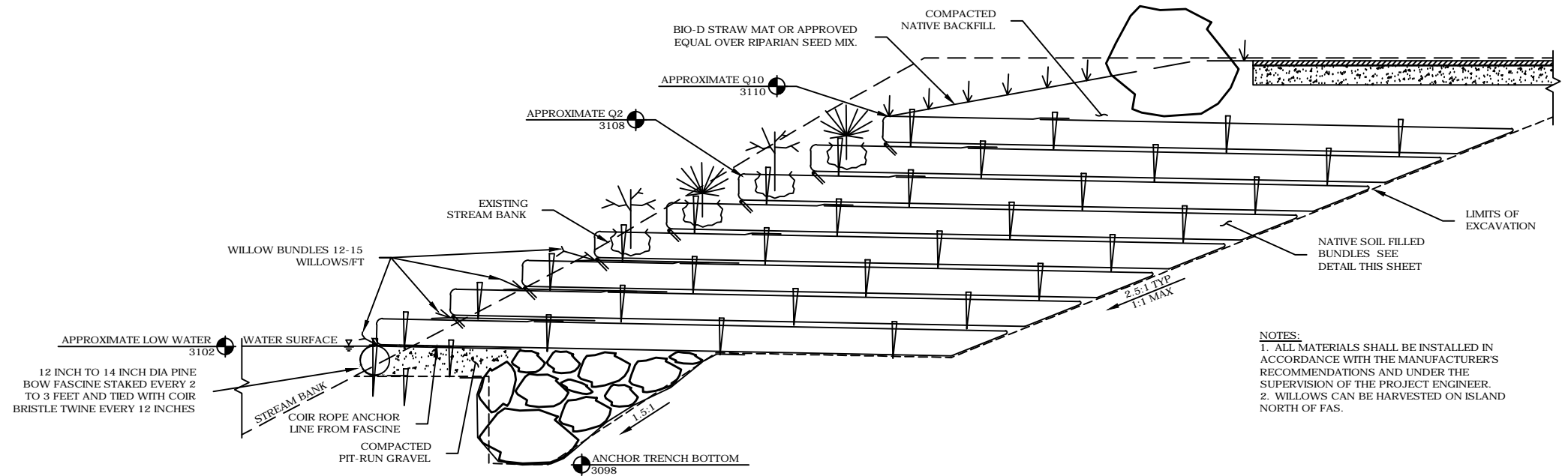


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DETAILS
Kelly Island FAS (near Missoula, MT)

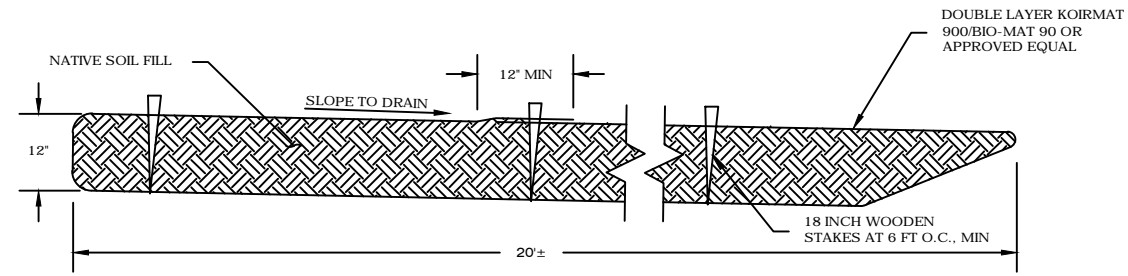
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NOTES:
 1. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND UNDER THE SUPERVISION OF THE PROJECT ENGINEER.
 2. WILLOWS CAN BE HARVESTED ON ISLAND NORTH OF FAS.

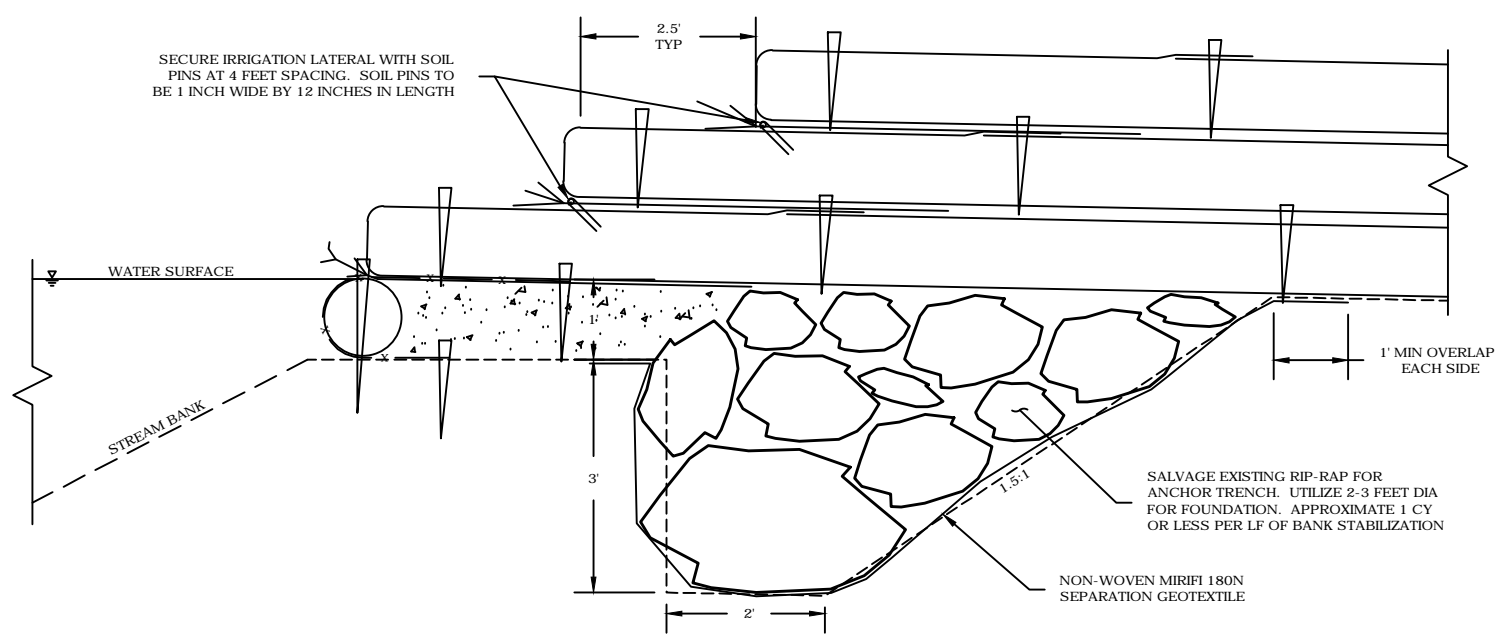
A
 D6 STEAMBANK DETAIL

NOT TO SCALE



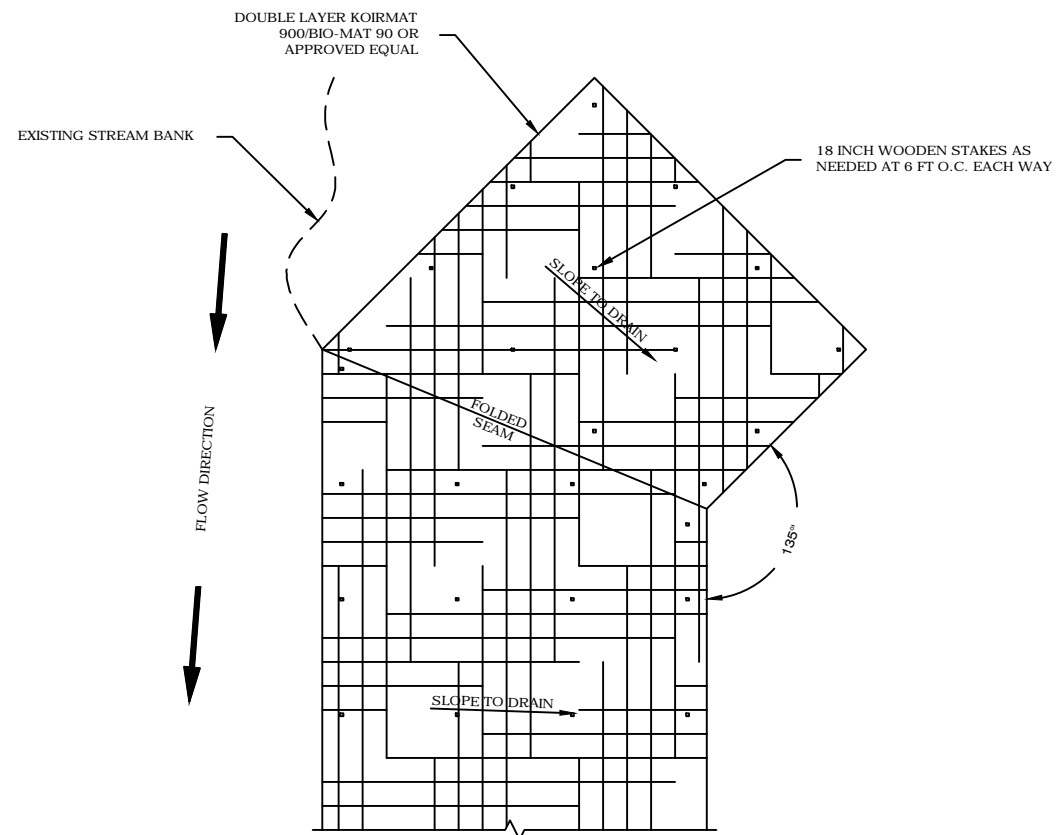
B
 D6 TYPICAL SOIL BUNDLE DETAIL

NOT TO SCALE



C
 D6 BANK IMPROVMENTS-TOE STABILIZATION DETAIL

NOT TO SCALE



D
 D6 TYPICAL SOIL BUNDLE END DETAIL

NOT TO SCALE

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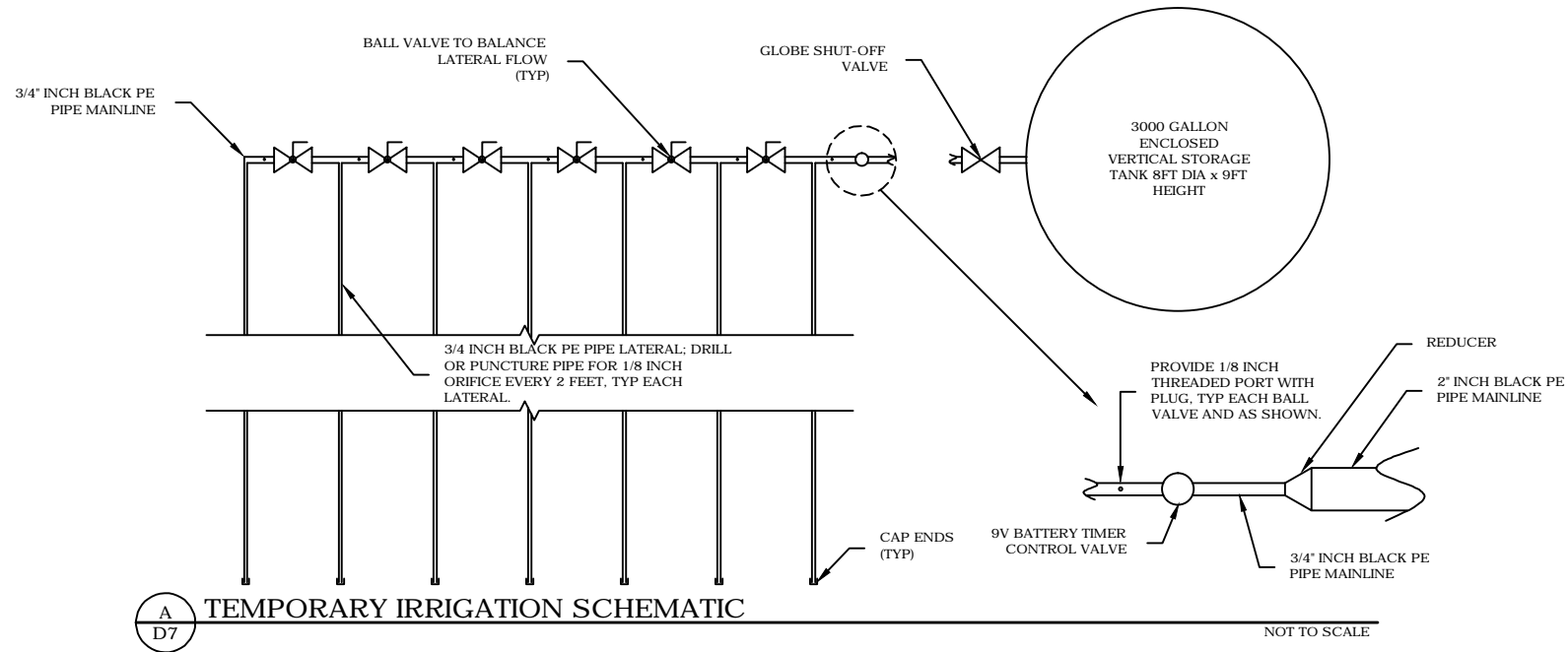
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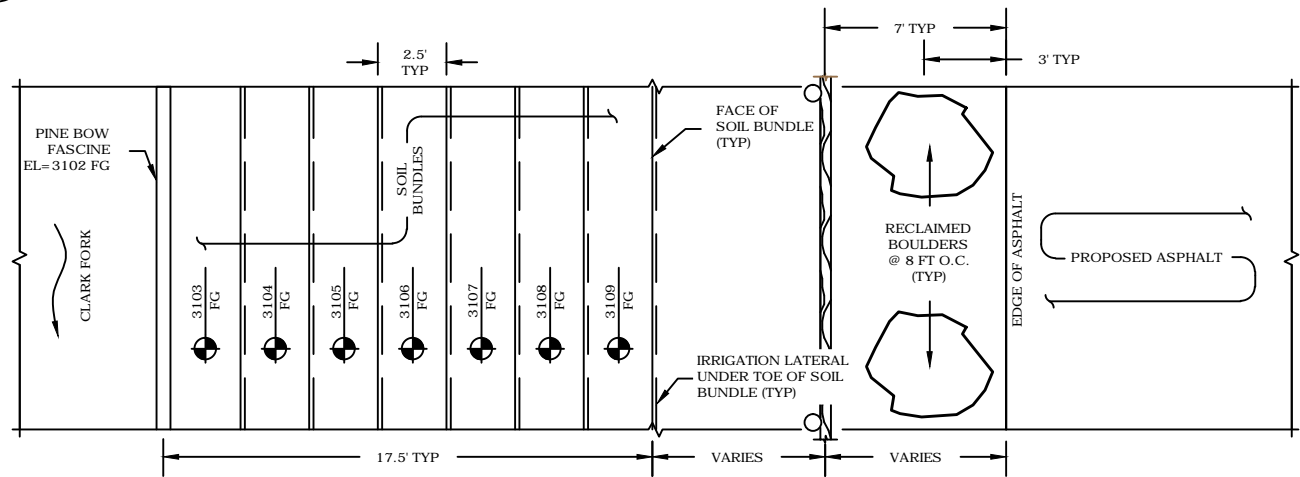


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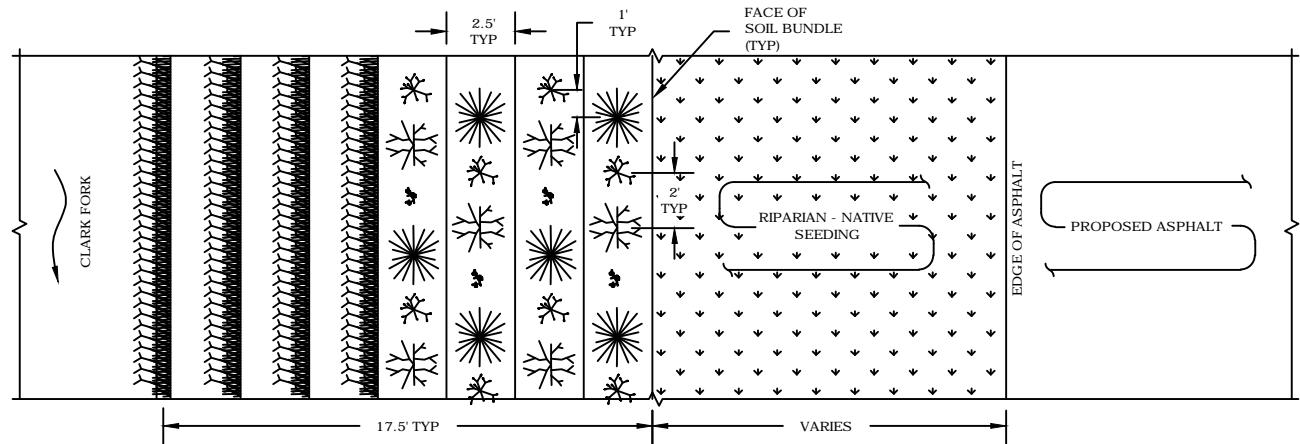
DETAILS
 Kelly Island FAS (near Missoula, MT)



TEMPORARY IRRIGATION SCHEMATIC



TYPICAL BANK IMPROVEMENTS LAYOUT



TYPICAL BANK IMPROVMENT REVEGETATION PLAN

NOTES

1. TABLE 1. SEED MIX

SEED NAME	% PURE LIVE SEED	LBS. PER ACRE
WESTERN WHEAT GRASS	30	*
STREAMBANK WHEATGRASS	20	*
HARD FESCUE	20	*
SLENDER WHEATGRASS	15	*
SMOOTH BROMEGRASS	15	*

*DRILLED RATE = 25 LBS/ACRE, BROADCAST AND HYDROSEED RATE = 50 LBS/ACRE

2. PLANT SPECIES LOCATION SCHEMATIC IN NATURE. CONTRACTOR TO COORDINATE WITH ENGINEER FOR SPECIFIC LAYOUT AND PLANT GROUPINGS.

LEGEND

- WOODS ROSE
- BLACK COTTONWOOD
- SUCCULENT HAWTHORN
- RED OSIER DOGWOOD
- HARVESTED WILLOW BUNDLES
- RIPARIAN - NATIVE SEED MIX

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